

## **APPENDIX A**

**Proposed Amendment for Discussion**

US Patent Application Serial No. 10/544,260

45. (Currently Amended) A method for repairing a subject's hip joint by hemiarthroplasty, said method comprising the steps of:

(A) determining at least one body characteristic comprising at least the body weight of the subject;

(B) using the at least one body characteristic comprising at least the body weight determined in Step A to determine the contact area of the subject's hip joint required to provide a hydrostatic pressure within the hip joint in the range of 0.01MPa to 5MPa; (C) using the at least one body characteristic comprising at least the body weight determined in Step A to select a prosthetic femoral head and complementary reamer [[,]] the selected reamer being useable to ream an acetabular socket having an inner surface and the selected femoral head having a radius of curvature that corresponds to the shape of the acetabular socket reamed by the selected reamer at least one body characteristic comprising at least the body weight determined in Step A such that, when the subsequent surgical implantation of the selected prosthetic femoral head is surgically implanted within an a reamed acetabular socket reamed by the selected the reamer [[,]] will result in a space between the prosthetic femoral head and the inner surface of the reamed acetabular socket within which fluid having a a space will exists between the prosthetic femoral head and an inner surface of the reamed acetabular socket and fluid having a hydrostatic pressure in the range of 0.01MPa-5MPa will accumulate in said space; and

(C[[D]]) reaming the hip joint's acetabulum using the selected reamer until cancellous bone is exposed to create a reamed acetabular socket t; and

(D[[E]]) surgically implanting the selected prosthetic femoral head selected in Step C such that resides within the reamed acetabular socket, thereby resulting in a space between the prosthetic femoral head and the inner surface of the reamed acetabular socket within which fluid having a hydrostatic pressure in the range of 0.01MPa-5MPa

~~naturally accumulates in said space, thereby stimulating the formation of new cartilage between the prosthetic femoral head and the inner surface of the acetabular socket.~~

46. (Previously Presented) A method according to claim 45, wherein the hydrostatic pressure is in the range 0.5-2MPa.

47. (Previously Presented) A method according to claim 46, wherein the hydrostatic pressure is 2MPa.

48. (Previously Presented) A method according to claim 45 further comprising:

positioning a membrane between the prosthetic femoral head and the inner surface of the acetabular socket for at least a period of time.

49. (Previously Presented) A method according to claim 48 wherein the membrane is resorbable.

50. (Previously Presented) A method according to claim 48 wherein the membrane is formed *in situ*.

51. (Previously Presented) A method according to claim 45 further comprising the step of:

positioning a spacer element between the prosthetic femoral head and the inner surface of the acetabular socket for at least a period of time.

52. (Previously Presented) A method according to claim 51 wherein the spacer element is resorbable.

53. (Previously Presented) A method system according to claim 45, wherein the prosthetic femoral head selected in Step C has a surface that deforms so as to sustain the hydrostatic pressure.

54. (Previously Presented) A method according to claim 45 wherein said at least one body characteristic determined in Step A comprises, in addition to body weight, at least one additional characteristic selected from the group consisting of:

dimensions of the subject's natural femur; and

dimensions of the subject's pelvis.

## **APPENDIX B**

**Rob Buyan**

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**From:** Rob Buyan  
**Sent:** Tuesday, August 10, 2010 12:26 PM  
**To:** 'jonathan.stroud@uspto.gov'  
**Subject:** US Patent Application Serial No. 10/544,260 (ULOND-001A)  
**Attachments:** ULOND-000-Proposed Amendment.doc

Examiner Stroud:

Thank you for taking time for the telephonic interviews regarding US Patent Application Serial No. 10/544,260.

Attached is a Word document incorporating the amendments to independent claim 45 as tentatively agreed upon today.

Sincerely,

**Rob Buyan**  
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**Proposed Amendment**

US Patent Application Serial No. 10/544,260

45. (Currently Amended) A method for repairing a subject's hip joint by hemiarthroplasty such that fluid which naturally accumulates in a space between a prosthetic femoral head and an inner surface of a reamed acetabular socket has a hydrostatic pressure within the range of 0.01MPa-5MPa, said method comprising the steps of:

(A) determining at least one body characteristic comprising at least the body weight of the subject;

(B) using the at least one body characteristic comprising at least the body weight determined in Step A to determine the contact area of the subject's hip joint required to provide a hydrostatic pressure within the hip joint in the range of 0.01MPa to 5MPa; (C) using the at least one body characteristic comprising at least the body weight determined in Step A to select a prosthetic femoral head and complementary reamer, the selected reamer being useable to ream an acetabular socket having an inner surface and the selected femoral head having a radius of curvature that corresponds to the shape of the acetabular socket reamed by the selected reamer at least one body characteristic comprising at least the body weight determined in Step A such that, when the subsequent surgical implantation of the selected prosthetic femoral head is surgically implanted within an a reamed acetabular socket reamed by the selected the reamer [[,]] will result in a space between the prosthetic femoral head and the inner surface of the reamed acetabular socket within which fluid having a space will exists between the prosthetic femoral head and an inner surface of the reamed acetabular socket and fluid having a hydrostatic pressure in the range of 0.01MPa-5MPa will accumulate in said space; and

(C[[D]]) reaming the hip joint's acetabulum using the selected reamer until cancellous bone is exposed to create a reamed acetabular socket t; and

(D[[E]]) surgically implanting the selected prosthetic femoral head selected in Step C such that it resides within the reamed acetabular socket, thereby resulting in a space between the prosthetic femoral head and the inner surface of the reamed acetabular socket within which fluid having a hydrostatic pressure in the range of 0.01MPa-5MPa naturally accumulates in said space, thereby stimulating the formation of new cartilage between the prosthetic femoral head and the inner surface of the acetabular socket.

46. (Previously Presented) A method according to claim 45, wherein the hydrostatic pressure is in the range 0.5-2MPa.

47. (Previously Presented) A method according to claim 46, wherein the hydrostatic pressure is 2MPa.

48. (Previously Presented) A method according to claim 45 further comprising:

positioning a membrane between the prosthetic femoral head and the inner surface of the acetabular socket for at least a period of time.

49. (Previously Presented) A method according to claim 48 wherein the membrane is resorbable.

50. (Previously Presented) A method according to claim 48 wherein the membrane is formed *in situ*.

51. (Previously Presented) A method according to claim 45 further comprising the step of:

positioning a spacer element between the prosthetic femoral head and the inner surface of the acetabular socket for at least a period of time.

52. (Previously Presented) A method according to claim 51 wherein the spacer element is resorbable.

53. (Previously Presented) A method system according to claim 45, wherein the prosthetic femoral head selected in Step C has a surface that deforms so as to sustain the hydrostatic pressure.

54. (Previously Presented) A method according to claim 45 wherein said at least one body characteristic determined in Step A comprises, in addition to body weight, at least one additional characteristic selected from the group consisting of:

dimensions of the subject's natural femur; and

dimensions of the subject's pelvis.